Complete Summary

GUIDELINE TITLE

Assessment and management of chronic pain.

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Mar. 87 p. [157 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2005 Nov. 77 p.

* * REGULATORY ALERT * *

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory information has been released.

- June 15, 2005, COX-2 Selective (includes Bextra, Celebrex, and Vioxx) and Non-Selective Non-Steroidal Anti-Inflammatory Drugs (NSAIDs): Labeling revised to include a boxed warning and a Medication Guide, highlighting the potential for increased risk of cardiovascular (CV) events and life-threatening gastrointestinal (GI) bleeding.
- April 7, 2005, Bextra (valdecoxib), Cox-2 inhibitors, Celebrex (celecoxib), Non-steroidal anti-inflammatory drugs (NSAIDS) (prescription and OTC, including ibuprofen and naproxen: Bextra (valdecoxib) withdrawn from the market and labels for other Cox-2 inhibitors and NSAIDS revised to include a boxed warning and a Medication Guide, highlighting the potential for increased risk of cardiovascular (CV) events and life-threatening gastrointestinal (GI) bleeding.

Additional Notices

- February 18, 2005, Gabitril (tiagabine): A bolded Warning will be added to the labeling to warn prescribers of the risk of seizures in patients without epilepsy. Although Gabitril has been shown to reduce the frequency of

seizures in patients with epilepsy, paradoxically, Gabitril's use has been associated with the occurrence of seizures in patients without epilepsy.

- April 19, 2005, Trileptal (oxcarbazepine): Revisions to the WARNINGS and PRECAUTIONS sections of the prescribing information. The updated WARNINGS section describes serious dermatological reactions in children and adults, and the PRECAUTIONS section has been updated to include language regarding multi-organ hypersensitivity reactions.
- July 1, 2005, Antidepressants: Public Health Advisory issued to update patients and healthcare providers in response to recent scientific publications that report the possibility of increased risk of suicidal behavior in adults treated with antidepressants.
- October 25, 2006, Effexor (venlafaxine HCl): Published retrospective studies report that venlafaxine overdosage may be associated with an increased risk of fatal outcome.
- September 29, 2006, Lamictal (lamotrigine): New preliminary information available regarding the effects of Lamictal on the baby if taken during the first three months of pregnancy.
- October 17, 2005, Cymbalta (duloxetine hydrochloride): Healthcare professionals notified of revision to the PRECAUTIONS/Hepatotoxicity section of the prescribing information to include precaution against using in patients with chronic liver disease.
- July 8, 2005, Duragesic (fentanyl transdermal system): Changes to the BOXED WARNING/WARNINGS, CONTRAINDICATIONS, PRECAUTIONS, and DOSAGE AND ADMINISTRATION sections of the prescribing information to include important safety information.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chronic pain

Note: Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life. This guideline is not intended for

the treatment of migraine headaches, cancer pain, advanced cancer pain, or in the context of palliative care or end-of-life management.

GUIDELINE CATEGORY

Evaluation
Management
Rehabilitation
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Pediatrics
Physical Medicine and Rehabilitation
Psychology
Surgery

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Occupational Therapists
Patients
Pharmacists
Physical Therapists
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

- To improve the treatment of patients with chronic pain by completing an appropriate biopsychosocial assessment
- To improve the function of patients with chronic pain by developing and using a comprehensive treatment plan that includes a multi-specialty team approach
- To improve the effective use of medications in the treatment of patients with chronic pain
- To ensure the appropriate use of interventional techniques as per guideline and technology assessment reports in the treatment of chronic pain

TARGET POPULATION

Physiologically mature adolescents (between 16–18 years) and adults

This guideline can be applied to pediatric population where noted.

This guideline is not intended for the treatment of migraine headaches, cancer pain, advanced cancer pain, or in the context of palliative care or end-of-life management.

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment/Evaluation

1. General history including psychological assessment, spirituality, and barriers to treatment
2. Physical examination including musculoskeletal and neurologic examination
3. History of pain
4. Diagnostic testing if needed including x-rays, computed tomography (CT), magnetic resonance imaging (MRI), electromyography, and nerve conduction
5. Assessment of pain and function using various assessment tools
6. Determining biological mechanism of pain (neuropathic, muscle, inflammatory, or mechanical/compressive)
7. Level I diagnostic procedures (sacroiliac joint injection, transforaminal epidural injection, discography)

Management/Rehabilitation/Treatment

1. General management including developing plan of care and setting realistic goals
2. Physical rehabilitation and psychosocial management including exercise fitness program, cognitive-behavioral therapy, and self-management
3. Pharmacologic management including:
    - Non-opioid analgesics such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs)
    - Opioids
    - Tricyclic anti-depressants
    - Non-tricyclic antidepressants
    - Anticonvulsant or antiepileptic drugs
    - Topical agents
    - Muscle relaxants and anti-spasmodics
    - Anxiolytics
    - Drugs for insomnia
4. Level I therapeutic procedures including
    - Facet joint injection
    - Percutaneous radiofrequency neurotomy
    - Intradiscal electrothermal therapy
    - Epidural corticosteroid injections
    - Vertebroplasty and kyphoplasty
    - Trigger point injections
5. Acupuncture
6. Level II management including
    - Referral to an interdisciplinary team and pain specialist
    - Surgery
    - Palliative interventions (nucleoplasty, spinal cord stimulation, intrathecal medication delivery systems)

- Multidisciplinary pain rehabilitation

MAJOR OUTCOMES CONSIDERED

- Effect of treatment on chronic pain
- Role of psychological factors in chronic pain
- Barriers to treatment of chronic pain

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Key conclusions (as determined by the work group) are supported by a conclusion grading worksheet that summarizes the important studies pertaining to the conclusion. Individual studies are classed according to the system presented below, and are designated as positive, negative, or neutral to reflect the study quality.

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results

from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

Study Quality Designations:

The quality of the primary research reports and systematic reviews are designated in the following ways on the conclusion grading worksheets:

Positive: indicates that the report or review has clearly addressed issues of inclusion/exclusion, bias, generalizability, and data collection and analysis.

Negative: indicates that these issues (inclusion/exclusion, bias, generalizability, and data collection and analysis) have not been adequately addressed.

Neutral: indicates that the report or review is neither exceptionally strong nor exceptionally weak.

Not Applicable: indicates that the report is not a primary reference or a systematic review and therefore the quality has not been assessed.

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Non-randomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost-analyses.

METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Institute Partners: System-Wide Review

The guideline draft, discussion, and measurement specification documents undergo thorough review. Written comments are solicited from clinical, measurement, and management experts from within the member medical groups during an eight-week period of review period.

Each of the Institute's participating medical groups determines its own process for distributing the guideline and obtaining feedback. Clinicians are asked to suggest modifications based on their understanding of the clinical literature coupled with their clinical expertise. Representatives from all departments involved in implementation and measurement review the guideline to determine its operational impact. Measurement specifications for selected measures are developed by the Institute for Clinical Systems Improvement (ICSI) in collaboration with participating medical groups following general implementation of the guideline. The specifications suggest approaches to operationalizing the measure.

Guideline Work Group

Following the completion of the review period, the guideline work group meets 1 to 2 times to review the input received. The original guideline is revised as necessary and a written response is prepared to address each of the responses received from member groups. Two members of the Committee on Evidence-Based Practice carefully review the input, the work group responses, and the revised draft of the guideline. They report to the entire committee their assessment of four questions: (1) Is there consensus among all ICSI member groups and hospitals on the content of the guideline document? (2) Has the drafting work group answered all criticisms reasonably from the member groups? (3) Within the knowledge of the appointed reviewer, is the evidence cited in the document current and not out-of-date? (4) Is the document sufficiently similar to the prior edition that a more thorough review (critical review) is not needed by the member group? The committee then either approves the guideline for release as submitted or negotiates changes with the work group representative present at the meeting.

Pilot Test

Member groups may introduce the guideline at pilot sites, providing training to the clinical staff and incorporating it into the organization's scheduling, computer, and other practice systems. Evaluation and assessment occur throughout the pilot test phase, which usually lasts for three-six months. At the end of the pilot test phase, ICSI staff and the leader of the work group conduct an interview with the member groups participating in the pilot test phase to review their experience and gather comments, suggestions, and implementation tools.

The guideline work group meets to review the pilot sites' experiences and makes the necessary revisions to the guideline, and the Committee on Evidence-Based Practice reviews the revised guideline and approves it for release.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI): For a description of what has changed since the previous version of this guidance, refer to "Summary of Changes – March 2007."

The recommendations for the assessment and management of chronic pain are presented in the form of two algorithms with 25 components, accompanied by detailed annotations. Algorithms are provided for Assessment and Management. Clinical highlights and selected annotations (numbered to correspond with the algorithm) follow.

Class of evidence (A-D, M, R, X) and conclusion grade (I-III, Not Assignable) definitions are repeated at the end of the "Major Recommendations" field. See also "Management of Chronic Pain: Evidence Grid" on p 3 of the original guideline document for summary of evidence cited in the guideline regarding level I and II treatment of chronic pain.

Clinical Highlights

- Chronic pain is separate from acute pain and is a difficult clinical problem to treat (Annotations #2, 12)
- Chronic pain is a persistent, life-altering condition. The target is management, not elimination. (Annotation #14)
- A patient-centered, multi-factorial, comprehensive care plan is necessary, one that includes addressing biopsychosocial factors. Addressing spiritual and cultural issues is also important. It is important to have a multidisciplinary team approach coordinated by the primary care physician to lead a team including specialty areas of psychology and physical rehabilitation. (Annotation #14)
- The goal of treatment is an emphasis on improving function through the development of long-term self-management skills including fitness and a healthy lifestyle. (Annotation #14)
- Medications are not the primary focus of treatment in managing pain. (Annotations #14, 19)

Assessment Algorithm Annotations

2. Critical First Step: Assessment

   Key Points:

   - All patients have the right to an adequate pain assessment including documentation of pain location, intensity, quality, onset/duration/variations/rhythms, manner of expressing pain, pain relief, what makes it worse, effects of pain, and a pain plan.
   - A general history and physical exam are essential for assessment of chronic pain.

- Baseline functional ability assessment can provide objectively verifiable information about a patient's quality of life and ability to participate in normal life activities.

All patients have the right to an adequate pain assessment including documentation of pain location, intensity, quality, onset/duration/variations/rhythms, manner of expressing pain, pain relief, what makes it worse, effects of pain, and a pain plan. The plan should include pain assessment tools that are appropriate for the individual, with self-report being the primary source, which includes the facilitation of regular reassessment and follow-up according to criteria developed by the individual organization.

In the evaluation of the patient with chronic pain it is essential to perform a good general history and physical examination of the patient. In addition, certain areas deserve specific attention.

The history of the chronic pain patient may be very revealing and helpful. Carefully identifying the onset and progression of the problem may help to focus how a problem developed from localized pain to a more generalized or multifocal pain experience for the patient. For example, a patient who develops a low back injury may go on to develop neck and upper limb symptoms as well. The history should also include the location, quality, intensity (such as on a visual analog scale), duration, aggravating and relieving factors of the pain. This can also include responses to and enumeration of prior treatments. Some inquiry of sleep and diet are also helpful.

It is essential also to elicit any history of depression or other psychopathology that may affect the perception of pain. Past or current physical, sexual, or emotional abuse is also an important factor. A history of chemical dependency is of interest in this patient population. The CAGE questionnaire is a useful tool for brief alcohol screening of the patient. Refer to the original guideline document for CAGE questionnaire.

Chronic pain frequently involves the musculoskeletal system and the nervous system, especially the spine and its contents. These areas should be examined more carefully and with attention to possible generators of pain relative to the patient's history.

Musculoskeletal: Observe for obvious deformity or atrophy. If atrophy is suspected, it should be measured. Asymmetry of the iliac crests can be a sign of sacroiliac joint pathology. Scoliosis per se is usually not a cause of pain.

Cyanosis or pallor of an extremity is also useful information as is asymmetry of limb temperature. Examine posture gait and station. Range of motion of the spine does not correlate well with pathology. It has more significance in peripheral joint pathology. Involved joints should be examined for signs of effusion, instability, and ligament or cartilage pathology. Palpation for areas of spasm or tenderness and for identification of trigger points is useful.

Neurological: Some brief assessment of mental status is appropriate. Patients with significant cognitive or language function impairment will be much more challenging to treat. Much of the identifiable findings in chronic pain patients will be referable to the peripheral nervous system. Therefore careful evaluation of muscle strength, sensation, and muscle stretch reflexes is important. Findings of allodynia (sensitivity to a non-noxious stimulus like light touch or rubbing) and hyperalgesia are useful in cases of suspected complex regional pain syndrome. Signs and symptoms of upper motor neuron dysfunction will provide clues to the existence of potentially painful conditions such as multiple sclerosis or myelopathy due to cervical spinal stenosis. Patients with hemiplegia or hemiparesis may present with central type pain syndromes.

Diagnostic Testing

There is no diagnostic test for chronic pain. It is important to remember that finding pathology on diagnostic tests does not necessarily prove that the identified pathology is causing the patient's pain. Nevertheless, diagnostic testing is useful in chronic pain patients for helping to direct treatment and referral.

Plain radiography is helpful in musculoskeletal pain to rule out pathology that might require more immediate attention (e.g., an unrecognized fracture or mass lesion). Dynamic x-rays of the spine are helpful in ruling out significant segmental instability.

Magnetic resonance imaging (MRI) and computed tomography (CT) are used very frequently especially in spine related pain. MRI is usually preferred for evaluating disc pathology. There are no good data to support or refute the use of MRI in chronic pain of musculoskeletal origin. Some general information about MRI in the spine and pain is important in interpreting these studies. Bulging discs are usually not significant in the absence of spinal stenosis. Disc degeneration and arthritic changes per se are not necessarily painful. The size of a disc protrusion does not correlate with pain level. Most pain physicians like to have this information when evaluating the patient, especially if some anesthesiologic intervention is contemplated for the pain. CT and CT myelography are useful in patients who cannot undergo MRI or who are being considered for surgery. Electromyography and nerve conduction studies are of use in patients suspected of having lower motor neuron dysfunction, nerve or nerve root pathology, or myopathy.

Evidence supporting this recommendation is of classes: B, C, D, R

Functional Assessment

Many patients with chronic pain have significant losses in ability to perform normal life activities. Baseline functional ability assessment can provide objectively verifiable information about a patient's quality of life and ability to participate in normal life activities. This information may then be used for:

- Identifying significant areas of impairment or disability
- Establishing specific functional outcome goals within a care plan

- Measuring the effectiveness of the care plan or treatment interventions

Standardized assessment tools are available. Personalized goal setting, such as regaining ability to perform a specific job task, hobby, or family activity, may also be used.

Pain Assessment Tools

Patient self report is the "most reliable indicator of the existence and intensity of pain" (National Institutes of Health) and is a key component of chronic pain assessment. Tools to assess chronic pain should:

- Be appropriate to the person regardless of age, race, creed, socioeconomic status and psychological or emotional background
- Include a multidimensional scale since chronic pain affects a person's entire being
- Address location, quality, sensory characteristics, intensity, duration, aggravating and alleviating factors, variability, and predictability
- Be used early in the process of patient evaluation

Refer to the original guideline document for more information of the following topics: multi dimensional tools, single dimensional tools, patients with barriers to communications that can affect assessment, general approach to use of pain assessment tools in chronic pain.

Evidence supporting this recommendation is of classes: C, R

3. Determine Biological Mechanism of Pain

There are many ways to classify types of pain. Based on consensus, the work group found it most helpful to classify this guideline by the following four types: neuropathic, inflammatory, muscle, and mechanical/compressive.

It is important to determine which of these mechanisms are at work in the chronic pain patient because the treatments depend on the type of pain. Two decades ago, the type of pain was not so important because all pain was treated in a similar way with a very narrow scope of drugs and therapies – basically non-steroidal anti-inflammatory drugs (NSAIDs), Tylenol, and sometimes opioids. There are now available mechanism-specific treatments for neuropathic pain, inflammatory pain, bone pain, and muscle dysfunction.

Remember that patients often will present with pain that has more than one mechanism. The clinician should determine the relative contribution of each mechanism to the total pain condition and devise treatment strategies to address the relevant mechanisms.

Evidence supporting this recommendation is of class: R

4. Neuropathic Pain

Neuropathic pain is pain produced by damage or dysfunction of the nervous system. Examples include sciatica from nerve root compression, diabetic peripheral neuropathy, trigeminal neuralgia, and postherpetic neuralgia. The clinical features are: the setting, the distribution, the character of the pain and the physical examination findings. The clinical setting is usually the first clue to neuropathic pain. A diabetic who complains of persistent pain is likely to have neuropathic pain since about 50% of diabetics develop neuropathy-related pain. A patient who develops pain after a stroke in the same territory is most likely having post stroke neuropathic pain. The character of neuropathic pain is usually described as burning or shooting/stabbing. If the pain follows a nerve distribution (e.g., median nerve for carpal tunnel syndrome), neuropathic pain should be considered. Other examples are stocking-glove distribution for peripheral neuropathy; trigeminal distribution for trigeminal neuralgia and dermatomal distribution for postherpetic neuralgia. The physical findings to look for with neuropathic pain are numbness in the pain territory, sensitivity to a non-noxious stimulus like light touch or rubbing (allodynia), or coolness of the skin in the pain territory (sympathetically mediated pain).

5. Muscle Pain

Skeletal muscle pain is a common cause of chronic pain. Fibromyalgia syndrome and myofascial pain syndrome are frequent diagnoses in pain clinics. Failure to properly diagnose muscle pain may result in poor treatment outcome, delayed recovery, and ineffective, unnecessary surgery.

Fibromyalgia syndrome and myofascial pain syndrome both result in sore, stiff, aching, painful muscles and soft tissues. Both syndromes share other symptoms including fatigue, poor sleep, depression, headaches, and irritable bowel syndrome. Occasional acute muscle pain is probably universal. Chronic muscle pain is extremely common. Most are able to function satisfactorily in daily activities despite chronic muscle pain. Some report pain-related disability and present a challenge to the health care system.

Fibromyalgia syndrome is characterized by widespread musculoskeletal aching, stiffness, and tenderness. It is one of the most common pain clinic diagnoses.

The American College of Rheumatology Criteria for Classification of fibromyalgia include:

- Widespread pain (trunk and upper/lower extremities)
- Pain in 11/18 tender spots
- Pain present for at least 3 months
- Other symptoms are chronic but not diagnostic including insomnia, depression, stress, fatigue, irritable bowel syndrome

Myofascial pain is regional muscle soft tissue pain commonly involving the neck, shoulders, arms, low back, hips, and lower extremities. Trigger points refer pain. Myofascial pain is common in patients seen in pain clinics. Etiology, diagnosis, and management are controversial.

Evidence supporting this recommendation is of class: C

6. Inflammatory Pain

Inflammatory pain such as arthritis, infection, tissue injury, and postoperative pain is also known as nociceptive pain because the inflammatory chemicals like prostaglandins directly stimulate primary sensory nerves that carry pain information to the spinal cord. The clinical features include heat, redness, and swelling at the pain site and a history of injury or known inflammation.

7. Mechanical/Compression Pain

Mechanical pain is aggravated by activity and temporarily relieved by rest. Neck and back pain are commonly related to muscle/ligament strain sprain, degeneration of disks or facets, or osteoporosis with compression fractures.

Mechanical/compressive pain is also a type of nociceptive pain because mechanical pressure or stretching directly stimulates the pain sensitive neurons. In this setting, the history and radiological findings usually tell the story. Examples include fracture, obstruction, dislocation, or compression of tissue by tumor, cyst, or boney structure. The treatment will usually require some sort of decompression or stabilization.

Evidence supporting this recommendation is of class: R

8. Is Pain Chronic?

Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life. This is not time dependent; however at 6 weeks (or longer than the anticipated healing time) patients should be thoroughly evaluated for the presence of chronic pain.

Evidence supporting this recommendation is of class: R

11. Specialty Referral/Consult

Possible correctable cause of pain should be evaluated by the appropriate medical/surgical consultant for evaluation and, if indicated, appropriate correctable treatment.

It is important for physicians to distinguish between a consultation and a referral.

Consultation: An evaluation of a patient with recommended treatment options with the patient then returning to primary care physician for recommendation implementation.

Referral: Patient is being sent to a specialist for not only evaluation, but for on-going care with little or no long-term involvement by the primary care (referring) physician.

12. Other Assessment

Key Points:

- Tools to assess chronic pain should be appropriate to the person, include a multidimensional scale and be used early in the process of patient evaluation.
- Identification and management of comorbid psychological disorders will facilitate appropriate biopsychosocial care.
- A comprehensive pain assessment begins with a determination of the biological type of pain, followed by a listing of contributing factors and barriers to treatment.

Functional Assessment Tools

A variety of assessment tools have been used in the medical literature for measuring, estimating, or describing aspects of a patient's functional ability. These tools often also include measures of pain perception and psychological status as well as function.

- Palliative Performance Scale (Karnofsky Scale)
- Oswestry Low Back Disability Index
- SF-36
- U.S. Department of Labor Physical Demand Table
- American Pain Foundation Scale (adapted from Oken, M.M.)

These tools all have limitations, including difficulties with administration and scoring, disease- or condition-specific design or failure to provide clinically useful information, which have probably contributed to a lack of widespread clinical use.

Use of the Institute for Clinical Systems Improvement (ICSI) Functional Ability Questionnaire (see Annotation Appendix C in the original guideline document) has been designed for the following purposes:

- Self-assessment by the patient
- Observer assessment by family members or health care workers
- Short completion time (1 to 2 minutes for 5 multiple choice questions)
- Simple scoring (between 25 and 100), suitable for electronic medical records
- Use at baseline and for periodic reassessment
- Use for establishing patient-specific functional goals within a care plan
- Use to measure the effectiveness of the care plan or treatment interventions

Psychological Assessment

Determine possible psychiatric contribution to clinical presentation.

Assessment questions to ask the patient:

- Are you depressed or anxious?
- Are you under any psychiatric care?
- Do you have a history of substance abuse?
- Do you have a history of verbal, physical, or sexual abuse?

Refer to the original guideline document for additional information on the following topics:

- Role of psychological assessment including depression, anxiety, substance abuse and dependence, sleep disorder, personality disorder, and history of abuse
- Coping patterns and resources
- Spirituality
- Work and disability issues
- Contributing factors and barriers to treatment

Management Algorithm Annotations

14. Level I General management

Key Points:

- Develop plan of care and set goals using the biopsychosocial model.
- A written plan of care is the essential tool for ensuring a comprehensive approach to treatment of a patient with chronic pain.
- All patients with chronic pain should participate in an exercise fitness program to improve function and fitness.
- A cognitive behavioral approach with functional restoration may reduce pain and will improve function.
- The presence of psychological difficulties should in no way invalidate a patient's complaint of pain nor should it eliminate the possibility that a general medical condition may also be present that is causing the pain.
- The medical decision-making for treatment of chronic pain needs an understanding of the patient's ethnic and cultural background, age, gender and spirituality in order to work with the patient's chronic pain symptomatology.
- Self-management insures active patient participation in the care plan and is essential.

A written Plan of Care is the essential tool for ensuring a comprehensive approach to treatment of a patient with chronic pain. To maximize the success of treatment a care plan must address the whole person in all of their complexity, including physical and biologic factors, psychological state and beliefs, as well as the family, social, and work environment (biopsychosocial model). To do this, it is important to have a multidisciplinary team approach coordinated by the primary care physician to lead a team including specialty areas of psychology and physical rehabilitation.

A Plan of Care for all patients with chronic pain should address all of the following 5 major elements:

- Set personal goals
- Improve sleep
- Increase physical activity
- Manage stress
- Decrease pain

Specific and measurable goals and clearly described specific treatment elements give patients a framework for restructuring a life that has often been significantly altered by chronic pain. Failure to improve pain and function when a patient is following the Plan of Care should lead to changes of the plan. Failure to follow a Plan of Care should lead to addressing barriers and further evaluation of stressors, psychosocial factors, or motivations.

See Appendix D, "Personal Care Plan for Chronic Pain" in the original guideline document.

It is important that realistic goals be set with patients early on regarding the potential benefits of treatment.

Patient Focus Group Feedback

It appears that limited education is done early on and patients do a lot of research on their own. Education is critical and includes setting realistic goals, providing education to patients about their disease state, explaining medications and also any interventional procedures. Well-informed patients will be able to take more self-responsibility for their care.

Other Patient Focus Group key points include:

- Be aware that the term 'chronic pain' may elicit a highly emotional response. Patients may feel discouraged that the pain will never go away despite their hope a cure will be found.
- Although patients would like a quick fix to their pain, frustration occurs when interventions that only provide temporary relief are found or utilized.
- Patients want to be included in the treatment plan. They are often proactive in seeking ways to alleviate or eliminate their pain. They may see several types of physicians and may have also tried to find relief from their pain in additional varieties of ways. Teamwork and empathetic listening in the development of a treatment plan is critical.
- When the physician acknowledges that chronic pain affects the whole person and really listens, patients are more likely to be open to learning how to live by managing their pain versus curing their pain.
- Most patients want to return to a normal routine of completing activities of daily living, (e.g., playing with children/grandchildren, going for a walk, and working within their limitations). The focus should be on improving function.
- Many patients have utilized a variety of interventions including medications and complimentary therapies.

Level I versus Level II Management

The treatment approaches described in this algorithm for the management of chronic pain are divided into two levels. Level I treatment encompasses the standard approaches to the treatment of chronic pain including pharmacologic management, intervention management, non-pharmacologic management, and complementary medicine management. These treatment approaches should be implemented as first steps towards rehabilitation before Level II treatments are considered. Level II treatment includes referral for multidisciplinary pain rehabilitation or surgery for placement of a spinal cord stimulator or intrathecal pump. Level II treatment may be effective intervention for chronic pain patients who have failed more conservative treatment options. Level II treatments are designed for the most complex and challenging chronic pain patients. The treatment options included in Level II are expensive and require a significant investment on the part of the patient to be effective.

Physical Rehabilitation with Functional Goals

Rehabilitation/Functional Management

Managing pain and restoring function are basic goals in helping the patient with chronic pain.

- Use a multidimensional inventory to rate average severity of the last weeks' pain and monitor progress.
- Use a Functional Activities of Daily Living tool (i.e., "Functional Ability Questionnaire" Appendix C in the original guideline document) to document pain related disability (inability to function in normal manner) and monitor progress.
- Determine baseline fitness, then set specific fitness goals with a gradual graded fitness program.

Physical rehabilitation is essential for the patient with chronic pain as most are significantly deconditioned. Focus on specific goals to restore function.

Self-management insures active patient participation and includes:

- A graded gradually progressive exercise program
- Psychosocial management (i.e., cognitive behavioral therapy)

Encourage overall fitness, activity, and a healthy lifestyle.

Fitness includes:

- Endurance activities (aerobic - i.e., walking)
- Strengthening
- Balance activities
- Flexibility

Passive modalities (transcutaneous electrical nerve stimulation [TENS], ultrasound, massage, corsets, traction, acupuncture) should be limited and used only with an active exercise program. Patients should be taught self-

management treatments to help manage pain (use of ice, heat, massage, relaxation, cognitive behavioral approach).

Biopsychosocial rehabilitation with functional restoration reduces pain and improves function. Self-management ensures active patient participation in managing pain and achieving reasonable goals of functional restoration.

Conclusion: All patients with chronic pain should participate in a physical activity program to improve function and fitness. Self-management insures active patient participation in the care plan and is essential.

Refer to the original guideline document for more information on rehabilitation/functional management.

Evidence supporting this recommendation is of classes: A, M, R

Psychosocial Management with Functional Goals

Chronic pain is frequently associated with psychological problems and even comorbid psychiatric diagnoses. The presence of psychological difficulties should in no way invalidate a patient's complaint of pain nor should it eliminate the possibility that a general medical condition may also be present that is causing the pain. If psychological difficulties or psychiatric comorbidities are found, the patient's treatment plan should include specific steps to address them.

Depression

A high percentage of patients with chronic pain have co-existing depression. In 2004, data were examined from primary care centers world-wide by the World Health Organization. They found that 22% of all primary care patients suffer from chronic debilitating pain. Further, they found that chronic pain patients were four times more likely to have comorbid depressive disorder than pain-free primary care patients. The findings also showed that the more diffuse the pain complaints, the greater the risk of depression and the bigger impact on the quality of life.

If depression in a chronic pain patient is severe or comorbid major depressive disorder is present in a patient with chronic pain (see the National Guideline Clearinghouse [NGC] summary of the Institute for Clinical Systems Improvement [ICSI] guideline Major Depression in Adults in Primary Care), it is important to note that such patients are at increased risk of suicide. Specifically assess if patient has considered harming him/herself or made plans to kill him/herself. If suicidal thoughts are present, assess whether patient has a concrete plan for self-harm; assess if they have the means to carry out the plan; and assess lethality of the plan. Suicidal risk is higher in individuals who are struggling with substance use/abuse, because judgment can be impaired. Past suicide attempt(s) increase risk of future attempts.

See also Annotation #12, "Other Assessment" in the original guideline document and Annotation #19, "Pharmacologic Management" below for more information on substance use/abuse.

If suicidality and/or major depressive disorder is present in the context of chronic pain, get psychiatric consultation immediately, because of risk of suicide. Also, management of chronic pain and work towards rehabilitation goals is not possible when severe depression is present. If comorbid major depressive disorder is diagnosed concurrently with chronic pain, depressive symptoms should be the primary focus of treatment. In those patients with either pain or depressive symptoms, assess both domains. Depression may be more than a facet of chronic pain when significant depression symptoms are present. If comorbidity is found between chronic pain and mild to moderate major depression, treat both conditions for optimal outcomes. If comorbid severe major depressive disorder is diagnosed concurrently with chronic pain, depressive symptoms should be the primary focus of treatment.

Some symptoms of depression including feelings of helplessness, dysphoria, and frustration are generally expected in patients suffering from chronic pain given the impact pain often has on ability to function and enjoy life. If targeted intervention can improve level of physical functioning and quality of life, mild depressive symptoms will likely improve without specific intervention.

Evidence supporting this recommendation is of classes: C, D, R

Cognitive-Behavior Therapy

Cognitive-behavioral approaches to the rehabilitation of patients with persistent and unremitting chronic pain are considered to be among the most helpful available. Patients may be referred to a cognitive-behavioral therapist, counselor, social worker, or psychologist for treatment. However, there are many cognitive-behavioral steps that can be implemented by primary care physicians within the busy structure of their practice to assist their patients towards rehabilitation.

Patients live in environments that exert powerful reinforcement for certain behaviors. Physician, by their very role as health care providers, are powerful reinforcers of behavior. By changing the contingencies of reinforcement, patients can make gains towards significant rehabilitation goals with the help of their physicians. The goals of cognitive-behavioral strategies in the management of chronic pain are to improve physical functioning, assist patients in returning to work, reduce disability, reduce pain-related fear/avoidance, and reduce psychological distress and depression.

Evidence supporting this recommendation is of classes: M, R

Cognitive-Behavioral Strategies for Primary Care Physicians

- Ask the patient to take an active role in the management of his/her pain. Research shows that patients who take an active role in their treatment experience less pain-related disability.
- Let the patient know that you believe that the pain is real and is not in his/her head. Let the patient know that the focus of your work together will be the management of his/her pain. ICSI Patient Focus Group feedback included patient concerns that their provider did not believe them/their child when they reported pain.
- Tell the patient that chronic pain is a complicated problem and for successful rehabilitation, a team of health care providers is needed. Chronic pain can affect sleep, mood, levels of strength and fitness, ability to work, family members, and many other aspects of a person's life. Treatment often includes components of stress management, physical exercise, relaxation therapy and more to help them regain function and improve the quality of their lives.
- Avoid telling patients to "let pain be their guide" whether it is stopping activity because of pain or taking medications or rest in response to pain.
- Prescribe time-contingent pain medications, not pain medications "as needed." Time-contingent medications allow a disruption in the associations between pain behavior and pain medication. The powerfully reinforcing properties of pain medicines are then not contingent upon high levels of pain and pain behavior.
- Schedule return visits to see you on a regular schedule and not let the appointments be driven by increasing levels of pain. Physicians are powerful reinforcers too.
- Reinforce wellness behaviors such as increased activity or participation in an exercise program.
- Enlist the family and other supports to reinforce gains made towards improved functioning too.
- Have patient involved in an exercise program or structured physical therapy.
- Assist the patient in returning to work. Do this in a step-wise fashion that is not dependent on level of pain.
- Fear of movement or fear of pain due to movement is a significant concern for many chronic pain patients. Inactivity or avoidance of movement leads to physical deconditioning and disability. Try not to rely on sedative or hypnotic medications to treat the fear many chronic patients show of activity or fear of increased pain. When chronic pain patients expose themselves to the activities that they fear, which simply means when they do the things they have been afraid of and avoiding, significant reductions are observed in fear, anxiety, and even pain level. If patients' fears are excessive, relaxation strategies may be helpful or referral for more formal and intensive cognitive-behavioral therapy may be necessary.

Evidence supporting this recommendation is of classes: A, D

Refer to the original guideline document for information on the following topics:

- Cognitive-behavioral interventions including relaxation therapies and cognitive techniques
- Culture and chronic pain
- Age and chronic pain
- Gender and chronic pain
- Spirituality and chronic pain

15. Level I Management: Neuropathic Pain

The first principle guiding any therapy is to eliminate the underlying causes of pain to the greatest possible extent with disease-specific measures. For example, better diabetes management should minimize the complications of diabetes, including pain. Chemotherapy or surgery that reduces tumor bulk will decrease pain caused by a tumor that is compressing nerve roots.

Symptomatic pain control can take the form of local or regional interventions, including nerve blocks, topical agents, or physical rehabilitative measures. In addition, systemic therapies can be applied, such as drug therapies or behavioral techniques that reduce pain.

See Appendix I, "Pharmaceutical Interventions for Neuropathic Pain" and Appendix K, "Neuropathic Pain Treatment Diagram" in the original guideline document.

Local or Regional Therapies

Topical therapies can be applied to localized peripheral tissues to reduce pain without significant systemic effects. Topical capsaicin applied three or four times per day can deplete substance P from local C-polymodal nociceptors and reduce pathological pain. It has been studied in diabetic neuropathy and postherpetic neuralgia. Preparations of topical lidocaine in the form of a cream or a patch have also been used for relief of localized neuropathic pain syndromes. Transcutaneous electrical nerve stimulation and other stimulation-based therapies can provide temporary relief in some cases of neuropathic pain caused by nerve root or plexus lesions, but such therapies may also be irritating, particularly when allodynia is present. In such cases, application of the stimulating electrode in adjacent, uninvolved dermatomes may be effective.

Evidence supporting this recommendation is of classes: A, R

Drug Therapies for Neuropathic Pain

See also Annotation #19, "Level I Other Management: Pharmacologic" below.

Among the many drugs used to manage neuropathic pain, gabapentin has growing acceptance among pain specialists and neurologists as a first-choice treatment. Gabapentin has recently proved effective in postherpetic neuralgia and diabetic neuropathy in multicenter controlled trials. Its favorable side effect profile and paucity of adverse interactions with other drugs contribute to its widespread use in neuropathic pain. Since excretion of the drug is

virtually 100% renal, the dose and frequency of administration is reduced in patients with renal insufficiency. Pregabalin is indicated for treatment of diabetic neuropathy and postherpetic neuralgia. Starting doses of 50 mg three times a day may be increased to 100 mg three times a day in one week. Postherpetic neuralgia patients who do not respond to 300 mg daily in two to four weeks may be increased to 300 mg twice daily. Oxcarbazepine is chemically similar to carbamazepine and may have benefits in the treatment of neuropathic pain, including trigeminal neuralgia and diabetic neuropathy. Starting doses of 150 mg to 300 mg twice a day may be increased to a maximum of 2,400 mg daily.

Other anticonvulsants have been utilized in neuropathic pain with variable success. Carbamazepine is still considered first-line therapy for idiopathic trigeminal neuralgia, but there is a lack of evidence of consistent success in other pain states. One study demonstrated efficacy of carbamazepine for diabetic peripheral neuropathy compared with nortriptyline-fluphenazine. Newer anticonvulsants are beginning to be investigated for their neuromodulating effects on various non-epileptic conditions such as mood, behavior, and pain. Among these drugs are topiramate, lamotrigine, oxcarbazepine, and tiagabine. Some preliminary studies have indicated a possible role for lamotrigine in trigeminal neuralgia, painful human immunodeficiency virus (HIV)-associated neuropathy, and complex regional pain syndrome type I. Clonazepam, a benzodiazepine, is used by many providers for nocturnally predominant pain.

Tricyclic antidepressants (amitriptyline, nortriptyline, desipramine, imipramine, and others) continue to hold a prominent place in the management of a broad range of pain disorders, including neuropathic pain. Their mechanism of action is believed to involve potentiation of descending inhibitory pathways, especially at the level of the lower brainstem. Among the large number of controlled and uncontrolled studies, two comparative trials have demonstrated superior efficacy for amitriptyline or desipramine over fluoxetine or lorazepam in diabetic neuropathy and postherpetic neuralgia. These trials showed that the effect of the tricyclic antidepressant on pain was independent of its effect on depression. A screening electrocardiogram is recommended for elderly patients and others at risk of the conduction delay that these drugs can cause.

Corticosteroids have a beneficial effect on neuropathic pain, probably through multiple mechanisms, including membrane stabilization and anti-inflammatory effects. Corticosteroids may be useful for short-term control of neuropathic radicular pain caused by tumor edema, tumor invading bone, and acute or subacute disc herniation.

Although most opioids are not known to exert antineuropathic pain effects, they are nevertheless potent analgesics. They have a role in reliable patients when other measures fail. Careful patient selection is critical to success with long-term opioid therapy. Two opioids, methadone and tramadol, may be more effective than others in neuropathic pain.

Refer to the original guideline document for more information.

Evidence supporting this recommendation is of classes: A, D

16. Level I Management: Muscle Pain

Screen for serious medical pathology and screen for psychological and social factors that may delay recovery.

Scientific evidence of the effectiveness of treatment is lacking. Well-designed studies need to be done.

Use a numeric pain rating and functional scale to determine severity of pain disability.

Use a biopsychosocial interdisciplinary team approach with a cognitive-behavioral component encouraging exercise and active participation of the patient in the plan of care.

A graded exercise program starting within baseline and gradually increasing in a time contingent manner works best.

Use the biopsychosocial interdisciplinary team approach with cognitive-behavioral component encouraging exercise and active participation of the patient in the plan of care.

Physical Rehabilitation

- Fitness program
    - Gentle graded strength
    - Cardiovascular
    - Flexibility
    - Balance
- Body mechanics
- Modalities
    - Ice/heat
    - Massage
    - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback

Drug Therapy

- Pain and sleep
    - Tricyclic antidepressants (nortriptyline low dose)

    - Cyclobenzaprine (short term)
- Depression and pain
    - Duloxetine
- Opioids rarely needed

Refer to the original guideline document for more information.

17. Level I Management: Inflammatory Pain

Screen for serious medical pathology and screen for psychological and social factors that may delay recovery.

Use a numerical pain rating and functional scale to assess severity of pain related disability.

Use a biopsychosocial interdisciplinary team approach with cognitive-behavioral component encouraging exercise and active participation of the patient in the plan of care.

Physical Rehabilitation

- Graded fitness program
    - Graded strengthening
    - Cardiovascular
    - Flexibility
    - Balance
- Body mechanics
- Modalities
    - Ice/heat
    - Massage
    - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback
- Coping

Drug Therapy

- Pain and sleep
    - Tricyclic antidepressants (nortriptyline low dose)
    - Cyclobenzaprine (short term)
- Depression and pain
    - Duloxetine
- Opioids rarely needed

- NSAIDs
- Immunologic drugs
- Other antidepressants

Refer to the original guideline document for more information.

18. Level I Management: Mechanical/Compressive Pain

Screen for serious underlying medical or neurological pathology and refer to appropriate specialist if indicated.

Screen for biopsychosocial and vocational factors that may delay recovery such as depression, stress, work injury, personal injury, fear avoidance, substance abuse, or severe deconditioning.

Screen for degree of pain using the numerical rating scale (0-10).

Screen for degree of disability using a disability rating scale.

- Patients with low degree of pain and low disability may benefit from simple evidence-based exercises and cognitive behavioral counseling.
- Patients with high level of pain and high degree of disability require a more comprehensive approach including a multidisciplinary team with coordinated philosophy, evidence-based exercise, and more intensive psychosocial assessment and management.

Use a biopsychosocial team approach:

Physical Rehabilitation

- Graded fitness program
  - Strengthening
  - Cardiovascular
  - Flexibility
  - Balance
- Body mechanics
- Modalities
  - Ice/heat
  - Massage
  - Self-management
- Aquatic therapy

Behavioral Management

- Depression/stress
- Relaxation techniques
- Cognitive behavioral
- Chemical dependency
- Anger management
- Biofeedback

Drug Therapy

- Pain and sleep
  - Tricyclic antidepressants
  - Nortriptyline low dose
- Antidepressants
- Depression and pain
- Opioids rarely needed
- NSAIDs

Conclusions:

- All patients with chronic mechanical pain should have a screen for serious underlying medical and neurological pathology.
- Assess for psychological social factors that may contribute to delayed recovery.
- Utilize biopsychological social interdisciplinary team approach using cognitive behavioral therapies to encourage functional activity and exercise.
- Self-management ensures active patient participation in managing pain and reaching reasonable functional goals.

Teach self-management and measure outcome using pain rating and a function tool such as the Functional Ability Questionnaire (see Appendix C in the original guideline document).

Refer to the original guideline for additional information.

Evidence supporting this recommendation is of classes: C, R

19. Level I Other Management

Pharmacologic Management

Key Points:

- A thorough medication history is critical to the development of an effective treatment plan.
- Define the goals of therapy before prescribing, and tailor medications to meet the individual goals of each patient.
- Identify and treat specific source(s) of pain, and base the initial choice of medication(s) on the severity and type of pain.
- Patients need to know that whether prescribed or non-prescribed, all drugs have risks and benefits. Watch for and manage side effects.
- For opioid therapy:
  - Use caution before starting a patient on long-term opioid therapy
  - Follow the 4 A's (Analgesia, Adverse drug reactions, Activity, Adherence)
  - The work group recommends the use of a written opioid agreement for patients anticipated to be on long-term therapy.

See Appendix F in the original guideline document for an example of an opioid agreement form.

Medications are not the primary focus of treatment in managing pain. They should be used when needed to meet overall goals of therapy in conjunction with other treatment modalities: psychosocial and spiritual management, rehab and functional management, non-pharmacologic and complementary medicine, and intervention management. Pharmacotherapy may include agents to treat specific types of pain, such as neuropathic pain, or adjunctive therapies to treat other comorbidities such as depression and anxiety. Use of medications therefore should be directed not just towards pain relief, but increasing function and restoring overall quality of life.

The basic elements to include anytime opioids are used are a diagnosis, a care plan, regular visits with the physician, follow-up, and documentation. See the Federation of State Medical Boards at: http://www.fsmb.org for complete information.

General Principles for Pharmacologic Management

- A thorough medication history is critical to the development of an effective treatment plan.
    - Include use of over-the counter drugs and herbals and other supplements.
    - Look for drug related fears and misconceptions, as they may lead to poor compliance with a therapeutic regimen. Differentiate between tolerance, physical dependence, and addiction. See Appendix L, "Glossary of Terms" in the original guideline document.
- Define the goals of therapy before prescribing, and tailor medications to meet the individual goals of each patient.
- Identify and treat specific source(s) of pain, and base the initial choice of medication(s) on the severity and type of pain.
    - Types include neuropathic, muscular, inflammatory, and mechanical/ compressive pain. See Annotations #15-18 above.
    - Give drugs an adequate therapeutic trial. When treating inflammatory or neuropathic pain, benefits may take weeks or longer to appear.
- Patients need to know that whether prescribed or non-prescribed, all drugs have risks and benefits. Watch for and manage side effects. See Appendix J, "Side Effects" in the original guideline document.
- Select an appropriate drug based on:
    - Characteristics of the agent (onset, duration, available routes of administration, dosing intervals, side effects). The least invasive route of administration is preferred, generally oral.
    - Patient factors (age, co-existing diseases, other medications, and response to previous treatments)
- Establish a pain management plan which may include the addition of other drugs: non-opioid, plus opioid, plus adjuvant analgesics when indicated.
    - Rational poly-pharmacy may include the use of two or more drugs with complementary mechanisms of action which may

provide greater pain relief with less toxicity and lower doses of each drug.
        - Avoid prescribing two drugs in the same class at the same time.
        - Be alert for possible interactions with other medication the patient is taking or additive side effects.
- Titrate doses to achieve optimal balance between analgesic benefit, side effects, and functional improvement.
    - Some medications require gradual upward titration to achieve optimal analgesia and to minimize adverse effects.
    - Optimize administration of analgesics. Generally better pain control is obtained with regularly scheduled doses and supplemented with as needed doses for break-through pain.
- Taper and discontinue drugs that don't meet treatment goals. If a drug does not produce the desired therapeutic outcome, there is no need to continue it. This practice helps to prevent expensive and potentially dangerous poly-pharmacy.

Evidence supporting this recommendation is of class: R

Non-Opioid Analgesics

Non-opioid analgesics to consider for use in the treatment of chronic pain include acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs).

Acetaminophen is an analgesic that may be used initially for the treatment of mild chronic pain or to supplement other agents in treating mild to moderate pain. It lacks anti-inflammatory effects, but is generally well tolerated at therapeutic doses. It does not damage the gastric mucosa but may have chronic renal or hepatic adverse effects. Dosage should be restricted to a maximum of 4 grams per 24 hours, including acetaminophen contained in combination opioid products such as hydrocodone with acetaminophen. Acetaminophen should be used cautiously or avoided in patients with liver impairment.

NSAIDs

NSAIDs are indicated for the treatment of mild to moderate inflammatory or non-neuropathic pain. All NSAIDs inhibit the enzyme cyclooxygenase (COX) inhibiting prostaglandin synthesis. The COX-2 inhibitor celecoxib appears to have fewer gastrointestinal side effects.

However, high dose, long-term use of COX-2 agents has a higher rate of cardiovascular adverse effects. Recent reports indicate that cardiovascular adverse effects are not limited to the COX-2 agents alone.

- All NSAIDs have gastrointestinal (GI) risks of gastritis and possible bleeding. Risk benefits should be weighed especially when treating elderly patients or those at higher risk for GI adverse effects. Consider using in combination with the gastroprotective agent misoprostol or a proton pump inhibitor.

- Use with caution in patients with coagulopathies or thrombocytopenia and those at risk for bleeding.
- Chronic NSAID use increases the risk of renal insufficiency, especially those with diabetes, and patients should be monitored for signs of reduced renal function.
- Ketorolac should not be used for longer than 5 days and therefore is not an appropriate choice of NSAID in the treatment of chronic pain.
- NSAIDs have significant opioid dose-sparing properties and in turn may reduce opioid-related side effects.
- Monitor all NSAID use including patient use of non-prescription drugs to prevent duplication of therapy and adverse effects.

See Appendix H, "Non-Opioid Analgesics" in the original guideline document.

Evidence supporting this recommendation is of class: R

Opioids

When is it appropriate to use opioids?

Prior to consideration of opioid use for the patient with chronic pain, a thorough evaluation as recommended in this document, should have been completed. If the ethical imperative to relieve pain requires opioid therapy prior to such a thorough evaluation, precede using good clinical judgement.

It is appropriate to consider opioid therapy for patients with persistent moderate to severe pain in the following circumstances:

- Clinical evidence suggests opioids are likely to be effective in neuropathic pain that is not responsive to first line therapies (tricyclic anti-depressants [TCAs] or gabapentin). Opioids are rarely beneficial in the treatment of inflammatory or mechanical/compressive pain and are not indicated for chronic use in treatment of headache (see the NGC summary of the ICSI guideline Diagnosis and Treatment of Headache).
- Opioids have an equal or better therapeutic index than alternative therapies.
- The medical risk of opioid therapy is relatively low.
- The patient is likely to be responsible in using the drug.
- Opioid therapy is considered part of the overall management for the pain syndrome.

Physicians should not feel compelled to prescribe opioids or any drug if it is against their honest judgment or if they feel uncomfortable prescribing the drug. Before prescribing an opioid, the work group recommends using the DIRE tool to determine a patient's appropriateness for long-term opioid management (see Appendix E in the original guideline document).

Patients should give informed consent before the start of opioid therapy and the consent discussion should be documented in the medical record. This discussion should include the low risk of opioid addiction in patients under a

physician's care, the necessity of adherence to prescribed dosing, the potential for cognitive impairment when taking the drug alone and/or in combination with sedative/hypnotics, and the likelihood that physical dependence will occur.

The goal of opioid therapy is to provide partial analgesia, and maintain or improve function with acceptable side effects. (Four A's: Analgesia, Adverse drug effects, Activity, Adherence).

At each patient visit, the assessment should specifically address these goals (with clear documentation of the 4 A's in the patient's medical record):

- Comfort (degree of analgesia)
- Opioid-related side effects
- Functional status (physical and psychosocial)
- Existence of aberrant drug-related behaviors

Patients should be carefully screened for risk of diversion or abuse. The following behaviors suggest relative contraindications to opioid use. With these patients, referral to pain or addiction specialist is advisable:

- History of substance abuse or prior prescription drug misuse
- Unsanctioned dose escalations on several occasions
- Non-adherence to other recommendations for pain therapy
- Unwillingness or inability to comply with treatment plan
- Social instability
- Unwillingness to adjust at-risk activities resulting in serious re-injury requiring additional opioid prescriptions

There is not enough evidence to permit generalizable conclusions regarding the abuse of opioids in chronic nonmalignant pain. However, careful patient selection and close monitoring of all nonmalignant pain patients on chronic opioids is necessary to assess effectiveness and watch for signs of abuse. [Conclusion Grade III: See Conclusion Grading Worksheet A -- Annotation #19 (Chronic Pain and Chemical Use) in the original guideline document.]

Refer to Annotation #19, Appendices G, I, and J in the original guideline document for additional information on opioids.

Tricyclic Anti-depressants (TCAs)

Tricyclic anti-depressants are the preferred initial therapy for neuropathic pain, especially if the patient has co-existing insomnia, anxiety, or depression. TCAs are categorized as secondary amines (nortriptyline or desipramine) or tertiary amines (amitriptyline and imipramine). Both classes are effective in the treatment of neuropathic pain but the tertiary amines have more anticholinergic side effects and generally should be avoided in the elderly.

- Analgesic effects of TCAs are independent of their antidepressant effect and analgesia may be seen with lower doses.

- Start low and increase doses gradually over several weeks to months. Maximum analgesic effect may take several weeks or longer to be seen.
- Baseline electrocardiogram (ECG) is indicated in patients at risk for cardiac adverse effects.
- Common side effects include sedation, dry mouth, constipation, and urinary retention. Use caution in patients with conditions that may be aggravated by TCAs including heart disease, symptomatic prostatic hypertrophy, neurogenic bladder, dementia, and narrow-angle glaucoma.

See Appendix I, "Pharmaceutical Interventions for Neuropathic Pain" in the original guideline document.

Evidence supporting this recommendation is of class: M

Other (Non-Tricyclic) Anti-depressants

The selective serotonin reuptake inhibitor class of antidepressants has reduced adverse effects compared with TCAs but efficacy in the treatment of neuropathic pain is generally not as good as that shown with TCAs. Bupropion, venlafaxine, and duloxetine have also shown efficacy in the treatment of neuropathic pain. These drugs can be recommended for patients that do not have adequate response or can not tolerate TCAs. Duloxetine in doses of 60 mg twice a day has been shown to improve pain and global measures of fibromyalgia, compared with placebo.

Evidence supporting this recommendation is of class: A

Anticonvulsant or Antiepileptic Drugs

The first generation anticonvulsants carbamazepine and phenytoin are effective in the treatment of neuropathic pain but may have unwanted central nervous system (CNS) side effects. Carbamazepine is approved for the treatment of trigeminal neuralgia and benefits are well established.

Pregabalin is indicated for treatment of diabetic neuropathy and postherpetic neuralgia.

Oxcarbazepine is chemically similar to carbamazepine and may have benefits in the treatment of neuropathic pain, including trigeminal neuralgia and diabetic neuropathy.

The second generation agent gabapentin is approved for the treatment of postherpetic neuralgia, but has been shown to have analgesic effects in many cases of neuropathic pain syndromes. To decrease the incidence of adverse effects, which are primarily somnolence and dizziness, start at low doses and titrate up gradually. An initial dose of 300 mg daily can be increased by 100–300 mg every 3 days, up to target doses of 1,800 to a maximum of 3,600 mg daily, taken in 3 divided doses.

Lamotrigine has efficacy in trigeminal neuralgia, neuropathies associated with human immunodeficiency virus infection, and post-stroke pain.

Evidence supporting this recommendation is of classes: A, M

Topical Agents

Topical lidocaine 5% patches (Lidoderm) are U.S. Food and Drug Administration (FDA) approved for post-herpetic neuralgia and have shown efficacy in other neuropathic pain syndromes. Systemic absorption of lidocaine is minimal and the patch has a clean safety profile with a dosage schedule of 12 hours on, 12 hours off.

Capsaicin used topically depletes the pain mediator substance-P from afferent nociceptive neurons. Topical creams and solutions have been used in treating both neuropathic pain and arthritic pain. Capsaicin should be applied for at least 6 weeks to see full benefits. The side effect of local burning is common and most patients become tolerant after a few days.

Evidence supporting this recommendation is of classes: A, D, M

Refer to the original guideline document for information on muscle relaxants and anti-spasmodics, anxiolytics, and drugs for insomnia.

Intervention Management

Key Points:

- Interventional techniques should be performed in conjunction with a comprehensive treatment plan that includes pharmacologic, rehabilitative, and psychological interventions.
- Many of the Level I procedures provide both diagnostic and therapeutic benefits, while Level II are reserved for patients who have failed conventional treatment.
- Diagnostic procedures are used to identify neural or musculoskeletal structures that are the source of the patient's pain symptoms.
- Therapeutic procedures are used to alleviate or reduce pain and should be used in conjunction with a comprehensive treatment plan.

Interventional techniques refer to procedures including spinal injections, nerve blocks, spinal cord stimulators, and implantable intrathecal drug delivery systems that are performed in an attempt to diagnose and treat chronic pain. If used alone, the evidence is limited in its success. These procedures should be performed in conjunction with a comprehensive treatment plan that includes pharmacologic, rehabilitative, and psychological interventions. Commonly performed interventional procedures will be categorized as Level I (diagnostic and therapeutic) and Level II (palliative). Many of the Level I procedures provide both diagnostic and therapeutic benefits while Level II interventions are reserved for patients who have failed conventional treatment.

See also Annotation #25, "Level II Management: Interdisciplinary Team Referral, Plus a Pain Medicine Specialist or Pain Medicine Specialty Clinic" below.

Level I Diagnostic Procedures

Examples of commonly performed Level I diagnostic procedures include sacroiliac joint injection, transforaminal epidural injection, and discography.

Level I Therapeutic Procedures

Examples of commonly used Level I therapeutic procedures include facet joint injection, percutaneous radiofrequency neurotomy, intradiscal electrothermal therapy, epidural corticosteroid injections, vertebroplasty and kyphoplasty, and trigger point injections.

Refer to the original guideline document for detailed information on Level I diagnostic and therapeutic procedures.

Complimentary Management

Acupuncture

Clinical research with randomized, placebo-controlled trials supports the use of acupuncture for certain chronic pain conditions such as fibromyalgia, headache, back pain, neck pain, and osteoarthritis of the knee.

Refer to the original guideline document for more information on acupuncture.

Evidence supporting this recommendation is of class: A, C, M, R

24. Has Enough Been Tried with Level I Management?

Failure to achieve improvement in chronic pain management using Level I management strategies, the primary care physician should consider a consultation and/or referral to a pain medicine specialist or pain medicine specialty clinic.

Reasons for consultation may include:

- Diagnostic assistance
- Advice on availability of current care plan and treatment strategies
- Advice on optimal pharmacotherapy
- Help with treatment planning for long-term pain management

Referral to a comprehensive pain management program should be strongly considered when a patient needs an intensive comprehensive evaluation by a "pain management team" (physician, psychologist, physical therapist, pharmacist, etc.). The team should have extensive training and experience in

pain management and each professional should be working as part of a multi-disciplinary team in a "pain management center" to meet the patient's needs.

The team works as part of a structured integrated long-term program where the goal is effective stabilization of the patient's pain, development of a pain management care plan, and return of the patient to be a functioning member of society.

25. Level II Management: Interdisciplinary Team Referral, Plus a Pain Medicine Specialist or Pain Medicine Specialty Clinic

Key Points:

- The Level II interdisciplinary team should do a thorough biopsychosocial assessment of the patient with chronic pain, and a comprehensive plan of care should be developed with active input from the patient and primary care provider.
- Surgery alone for chronic pain relief lacks compelling evidence of efficacy
- Palliative interventions are used when conventional and less invasive procedures have failed, and patients should have documented compliance with a comprehensive care plan and surgery is not a viable option.

Level II management of patients with chronic pain is indicated when the patient has had a thorough trial of Level I management (see annotations #14-24 above), yet has not met the goals of comfort/pain control and function. Level II management should include an interdisciplinary team including the primary care provider, a medical pain specialist, a behavioral health pain specialist, and a physical therapist trained in a biopsychosocial approach to chronic pain. If possible, this management should be provided in the patient's community. If an interdisciplinary Level II pain team is not available in the community, it may be necessary to obtain these services outside the community.

Level II interdisciplinary chronic pain team assessment should be obtained in a timely manner, sometimes as early as 4 to 8 weeks after the onset of acute pain. The goal is to prevent or effectively manage chronic pain syndrome (disability in work or personal function related to pain).

The Level II interdisciplinary team should do a thorough biopsychosocial assessment of the patient with chronic pain. A comprehensive plan of care should be developed with active input from the patient and primary care provider. The Plan of Care should focus on objective functional goals and pain management. Elective surgery and invasive procedures should be done after the Level II interdisciplinary team assessment. Specific goals to integrate the patient back into the community and to usual activities should be a part of the plan of care.

Surgical Management of Patients with Chronic Pain

Surgery alone for chronic pain relief lacks compelling evidence of efficacy.

- Cauda equina syndrome is a neurosurgical or orthopedic spine surgery emergency. See the NGC summary of the ICSI guideline Adult Low Back Pain.
- For sudden, progressive or severe neuromotor deficit (e.g., foot drop or elbow extensor weakness, difficulty walking), consult a spine surgery specialist. See also the NGC summary of the ICSI guideline Adult Low Back Pain.
- Patients with persistent radicular pain after appropriate conservative treatment may be candidates for surgical treatment. See also the NGC summary of the ICSI guideline Adult Low Back Pain.

Surgery for patients with chronic pain may not be helpful, and may be harmful.

- Surgery for chronic pain is usually elective.
    - Do a psychosocial screen before doing elective surgery (screen for personality disorder, psychopathology that may interfere with good outcome).
    - Be sure patient has had a thorough conservative management program before considering elective surgery.
    - Be sure patient expectations of surgery are reasonable by providing clear evidence-based information.
- Check for serious medical and surgical pathology before starting pain management program.
- Focus on improving function, not just pain.
- Surgery for chronic low back pain may benefit some patients," but nearly half will not benefit."
- Neurosurgical techniques for chronic pain resistant to an adequate conservative approach hold promise, but have limited scientific evidence:
    - Ablative techniques include cordotomy, myelotomy, cingulotomy, and mesencephalotomy.
    - Stimulation techniques include motor cortex stimulation, deep brain stimulation, and spinal cord stimulation.

Patients with chronic pain are best managed with an interdisciplinary team approach.

- Before doing elective surgery, obtain an interdisciplinary team assessment.
- Discuss realistic outcome before surgery (effect of surgery on pain and function including activities of daily living and vocation).
- After surgery the patient with chronic pain is best managed by an interdisciplinary team using a biopsychosocial approach.

Patients with chronic pain should have outcome measurement before and after surgery to determine efficacy.

- After surgery, patient should have an active pain rehabilitation program and should start an independent lifetime fitness program.

Evidence supporting this recommendation is of classes: C, M, R

Refer to the original guideline document for information on palliative interventions including nucleoplasty, spinal cord stimulation, intrathecal medication delivery systems, and multidisciplinary pain rehabilitation.

Definitions:

Conclusion Grades:

Grade I: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

Grade II: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

Grade Not Assignable: There is no evidence available that directly supports or refutes the conclusion.

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Non-randomized trial with concurrent or historical controls

- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

CLINICAL ALGORITHM(S)

Detailed and annotated clinical algorithms are provided for:

- Assessment of Chronic Pain
- Management of Chronic Pain

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is classified for selected recommendations (see "Major Recommendations.")

In addition, key conclusions contained in the Work Group's algorithm are supported by a grading worksheet that summarizes the important studies pertaining to the conclusion. The type and quality of the evidence supporting these key recommendations is graded for each study.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Improved assessment and treatment of patients with chronic pain
- Improved function of patients with chronic pain due to developing and using a comprehensive treatment plan including a multi-specialty team approach
- Appropriate use of medications and interventional techniques

POTENTIAL HARMS

Adverse Effects of Medications

Acetaminophen

- Hepatotoxicity

Non-steroidal Anti-inflammatory Drugs (NSAIDs)

- Gastrointestinal upset
- Bleeding tendency
- Nephrotoxicity
- Cardiovascular side effects

Selective Cox II Inhibitors

- Gastrointestinal upset
- Liver dysfunction
- Nephrotoxicity
- Cardiovascular adverse effects
- Caution in patients with sulfa allergy, renal insufficiency, and heart failure. May also cause and/or worsen hypertension

Anticonvulsant Drugs

- Somnolence
- Cerebellar symptoms
- Myelosuppression (carbamazepine)

Tricyclic Antidepressants

- Sedation
- Dry mouth
- Constipation
- Urinary retention
- Orthostatic hypotension
- Anticholinergic side effects
- Use with caution in patients with conditions that may be aggravated by tricyclic antidepressants including heart disease, symptomatic prostatic hypertrophy, neurogenic bladder, dementia, and narrow-angle glaucoma

Corticosteroids

- Hyperglycemia

Topical Capsaicin

- Local burning

Opioids

- Nausea and vomiting
- Constipation
- Pruritus
- Delirium
- Myoclonus
- Respiratory depression
- Hyperalgesia

Refer to Annotation Appendix I in the original guideline document for additional information on side effects of antidepressants, antiepileptic drugs, and opioids used in chronic pain syndrome.

Surgery

- Surgery for patients with chronic pain may not be helpful, and may be harmful.

CONTRAINDICATIONS

CONTRAINDICATIONS

Relative Contraindications to Opioid Use

- History of substance abuse or prior prescription drug misuse
- Unsanctioned dose escalation on several occasions
- Nonadherance to other recommendations for pain therapy
- Unwillingness or inability to comply with treatment plan
- Social instability
- Unwillingness to adjust at-risk activities resulting in serious re-injury requiring additional opioid prescriptions

Contraindications to Tricyclic Antidepressants

- Tertiary amines should not be used in elderly patients

Contraindications to Other Pain Treatments

- Fenoprofen calcium (Nalfon) is contraindicated in patients with impaired renal function.

- Aspirin is contraindicated in the presence of fever or other evidence of a viral illness.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients are urged to consult a health care professional regarding their own situations and any specific medical questions.
- These clinical guidelines are designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and are not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. When four or more groups choose the same guideline to implement and they wish to collaborate with others, they may form an action group.

In the action group, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

Key Implementation Recommendations

1. It is important to take both a clinical and an operational approach for successful implementation of this guideline.
2. Develop a process that allows patients with chronic pain to see a dedicated care provider who has an interest or expertise in chronic pain. The care provider is responsible for care management involving chronic pain in order to foster continuity while allowing the primary care physician to focus on medical diagnosis.

3. Develop a process for handing off patients to a dedicated chronic pain provider within the clinic.
4. Develop a process to work collaboratively with other care providers in prescribing opioids with shared patients (e.g., dentists, specialists).
5. Establish a policy for monitoring and maintaining opioid agreements for prescription refills with other clinics, pharmacies, dentists and specialists.
6. Develop a process for scheduling follow-up patient visits to deter drug-seeking behaviors with other care providers. For instance, support personnel calling patients to schedule follow-up appointments with dedicated chronic pain physician.
7. Develop staff and physician training regarding the organizations process for treating chronic pain patients that could include process of referrals to chronic pain provider within the system, follow-up visits, prescription refills and continuity of care.
8. Assemble a chronic pain care team that minimally consists of a physician champion and medical support staff. Suggestion for care providers from other disciplines includes pharmacy, chemical dependency, neurology, home care, social work, physical medicine & rehabilitation and physical therapy.
9. Determine population International Classification of Diseases, Ninth Revision (ICD-9) codes for data collection that is unique to chronic pain patients in your facility. Examples of this would be:
    - Low back pain
    - Headache
    - Neck pain
    - Fibromyalgia
    - Chronic pain

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Chart Documentation/Checklists/Forms
Clinical Algorithm
Patient Resources
Pocket Guide/Reference Cards
Quality Measures
Quick Reference Guides/Physician Guides

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

RELATED NQMC MEASURES

- Assessment and management of chronic pain: percentage of patients diagnosed with chronic pain who are prescribed an opioid who have documentation of an opioid agreement form in the medical record.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Mar. 87 p. [157 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Nov (revised 2007 Mar)

GUIDELINE DEVELOPER(S)

Institute for Clinical Systems Improvement - Private Nonprofit Organization

GUIDELINE DEVELOPER COMMENT

Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Community Medical Centers, Allina Medical Clinic, Altru Health System, Aspen Medical Group, Avera Health, CentraCare, Columbia Park Medical Group, Community-University Health Care Center, Dakota Clinic, ENT Specialty Care, Fairview Health Services, Family HealthServices Minnesota, Family Practice Medical Center, Gateway Family Health Clinic, Gillette Children's Specialty Healthcare, Grand Itasca Clinic and Hospital, HealthEast Care System, HealthPartners Central Minnesota Clinics, HealthPartners Medical Group and Clinics, Hutchinson Area Health Care, Hutchinson Medical Center, Lakeview Clinic, Mayo Clinic, Mercy Hospital and Health Care Center, MeritCare, Mille Lacs Health System, Minnesota Gastroenterology, Montevideo Clinic, North Clinic, North Memorial Care System, North Suburban Family Physicians, Northwest Family Physicians, Olmsted Medical Center, Park Nicollet Health Services, Pilot City Health Center, Quello Clinic, Ridgeview Medical Center, River Falls Medical Clinic, Saint Mary's/Duluth Clinic Health System, St. Paul Heart Clinic, Sioux Valley Hospitals and Health System, Southside Community Health Services, Stillwater Medical Group, SuperiorHealth Medical Group, University of Minnesota Physicians, Winona Clinic, Ltd., Winona Health

ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; e-mail: icsi.info@icsi.org; Web site: www.icsi.org.

SOURCE(S) OF FUNDING

The following Minnesota health plans provide direct financial support: Blue Cross and Blue Shield of Minnesota, HealthPartners, Medica, Metropolitan Health Plan, PreferredOne and UCare Minnesota. In-kind support is provided by the Institute for Clinical Systems Improvement's (ICSI) members.

GUIDELINE COMMITTEE

Committee on Evidence-Based Practice

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Work Group Members: Richard Timming, MD (Work Group Leader) (HealthPartners Medical Group) (Physicial Medicine and Rehabilitation); Steven Daniels, MD (MeritCare) (Anesthesiology); W. Michael Hooten, MD (Mayo Clinic) (Anesthesiology); Brian Bonte, DO (Hutchinson Medical Center) (Family Medicine); David von Weiss, MD (Park Nicollet Health Services) (Family Medicine); Susan Ferron, MD (Community University Health Care Center) (Internal Medicine); James Smith, MD (HealthPartners Medical Group) (Internal Medicine); Miles Belgrade, MD (Fairview Health Services) (Neurology); Patrick Rivard, RN (Gillette Children's Specialty Healthcare) (Nursing); Fozia Abrar, MD (HealthPartners Medical Group) (Occupational Medicine); Neal Walker, RPh (Fairview Range Regional Health Services) (Pharmacy); Michael Gonzales, MD (MeritCare) (Physical Medicine and Rehabilitation); Barbara Bruce, PhD (Mayo Clinic) (Psychology); Janet Jorgenson-Rathke, PT (Institute for Clinical Systems Improvement) (Measurement/Implementation Advisor); Pam Pietruszewski, MA (Institute for Clinical Systems Improvement) (Facilitator)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

In the interest of full disclosure, ICSI has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. The reader should not assume that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform readers. Readers of the guideline may assume that only work group members listed below have potential conflicts of interest to disclose.

Michael Gonzales, MD, received honoraria and travel support from Pfizer and Eli Lilly.

Miles Belgrade, MD, has significant financial interest in Johnson & Johnson, received research or grant funding from Janssen, and received honoraria from Pfizer and Select Comfort.

Barbara Bruce, PhD, received grant support from the Mayo Foundation.

Steven Daniels, MD, received honoraria and travel support from Pria Care, Eli Lilly, and Elan.

No other work group members have potential conflicts of interest to disclose.

ICSI's conflict of interest policy and procedures are available for review on ICSI's website at www.icsi.org.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2005 Nov. 77 p.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Assessment and management of chronic pain. Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Mar. 1 p. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Assessment and management of chronic pain. Guideline summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Mar. 6 p. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Brief pain inventory (Short Form). Annotation appendix A in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Patient Health Questionnaire (PHQ-9). Annotation appendix B in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Functional ability questionnaire. Annotation appendix C in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- Personal care plan for chronic pain. Annotation appendix D in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.

- Neuropathic pain treatment diagram. Annotation appendix K in the original guideline document. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- ICSI pocket guidelines. April 2006 edition. Bloomington (MN): Institute for Clinical Systems Improvement, 2006. 298 p.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

PATIENT RESOURCES

The following is available:

- Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Mar. 54 p.

Electronic copies: Available in Portable Document Format (PDF) from the Institute for Clinical Systems Improvement (ICSI) Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on January 13, 2006. This summary was updated by ECRI on November 16, 2006, following the FDA advisory on Lamictal (lamotrigine). This summary was updated by ECRI on November 22, 2006, following the FDA advisory on Effexor (venlafaxine HCl). This NGC summary was updated by ECRI Institute on May 23, 2007.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx.

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 10/8/2007